# CLAIM AMENDMENTS

Claim 1 (currently amended): A method of depositing ~~at least one~~ a plurality of dielectric ~~layer~~ layers simultaneously on facets of an optical device in which light travels horizontally to increase facet reflectance, comprising the steps of:

a) selecting a substrate;

b) forming an optical device on the substrate, where the optical device includes at least one active layer in which photon emission is stimulated;

c) forming an active-layer pump structure on the optical device;

d) forming a plurality of facets in the optical device, where the plurality of facets include at least two different orientations; and

e) coating ~~a user-definable number~~ the plurality of dielectric layers simultaneously onto the plurality of facets in at least two different ~~orientation~~ orientations, where a first dielectric layer of the plurality of dielectric layers has a user-definable optical thickness, and where each successively coated dielectric layer of the plurality of dielectric layers is selected from the group of dielectric layers consisting of a dielectric layer with a higher index of refraction than a previously coated dielectric layer of the plurality of dielectric layers, and a dielectric layer with a lower index of refraction than the previously coated dielectric layer of the plurality of dielectric layers.

Claim 2 (original): The method of claim 1, wherein the step of selecting a substrate is comprised of the step of selecting a substrate from the group of substrates consisting of sapphire, GaAs, GaSb, InAs, InP, InSb, and quartz.

Claim 3 (original): The method of claim 1, wherein the step of selecting a substrate is comprised of the step of selecting a substrate from the group of substrates consisting of undoped substrate, doped substrate, doped n+ substrate, doped p+ substrate, and semi-insulating substrate.

Claim 4 (original): The method of claim 1, wherein the step of forming an optical device of the substrate is comprised of the step of forming an optical device on the substrate selected from the group of optical devices consisting of a PN junction of direct gap semiconductors, a PIN structure with direct gap semiconductor quantum wells, a graded index structure with direct gap semiconductor quantum wells, and Er doped glass layers.

Claim 5 (original): The method of claim 1, wherein the step of forming an optical device on the substrate is comprised of the step of forming an optical device in the form selected from the group of optical device forms consisting of a ridge, a buried heterostructure, a polygonal mesa, a ring, and a Y-structure.

Claim 6 (original): The method of claim 1, wherein the step of forming an active-layer pump structure on the optical device is comprised of the step of forming an active-layer pump structure selected from the group of active-layer pump structures consisting of a physical contact and an optical window.

Claim 7 (original): The method of claim 1, wherein the step of forming a plurality of facets in the optical device is comprised of etching facets in a method selected from the group of etching

methods consisting of Inductively Coupled Plasma (ICP), Reactive Ion Etching (RIE), Chemically Assisted Ion Beam Etching (CAIBE), and anisotropic wet etching.

Claim 8 (currently amended): The method of ~~claim1~~ claim 1, wherein the step of coating a user-definable number of dielectric layers simultaneously onto the plurality of facets in at least two different orientations is comprised of the step of coating a user-definable number of dielectric layers onto the plurality of facets in at least two different orientations in a method selected from the group of coating methods consisting of Plasma Enhanced Chemical Vapor Deposition (PECVD), plasma assisted sputtering, and thermal planetary evaporation.

Claims 9-20 (cancelled)

Claim 21 (new): The method of claim 1, wherein the step of coating the plurality of dielectric layers simultaneously onto the plurality of facets in at least two different orientations is comprised of coating a user-definable number of pairs of dielectric layers simultaneously onto the plurality of facets in at least two different orientations, where a first dielectric layer in each user-definable number of pairs of dielectric layers has a lower index of refraction than a second dielectric layer in each user-definable number of pairs of dielectric layers, and where the optical thickness of each first dielectric layer and each second dielectric layer in each user-definable number of pairs of dielectric layers is an odd integer multiple of quarter wavelengths.